SEMESTER END EXAMINATION JUNE-2023

Course Name: - BTech **Semester:- 2**

Paper Name: - Basic Electrical Engineering **Paper Code:- TES 202**

Time - 3 Hrs + 20 minutes per hour extra time for V.I. & examinees with writer. **Max Marks-70**

समय– 3 घण्टे + 20 मिनट प्रति घंटे अतिरिक्त–दृष्टिबाधित एवं सह लेखक परीक्षार्थियों के लिए। अधिकतम अंक–70

Instructions:

- The question paper consists of three sections namely A, B, C. All sections are compulsory.
- Section A- Each question carries 3 mark. All questions are compulsory.
- Section B- Answer any 5 out of 7 given questions in maximum one hundred fifty (150) words. Each question carries 7 marks.
- Section C- Answer any 2 out of 3 given questions in maximum three hundred (300) words. Each question carries 10 marks.

निर्देश:

- प्रश्न पत्र में तीन खण्ड अ, ब, व स हैं। सभी खण्ड अनिवार्य हैं।
- खण्ड–अ में प्रत्येक प्रश्न तीन अंक का है। सभी प्रश्न अनिवार्य हैं।
- खण्ड–ब में सात प्रश्नों में से किन्ही पाँच प्रश्नों के उत्तर अधिकतम 150 शब्दों में दें। प्रत्येक प्रश्न सात अंक का है।
- खण्ड–स में तीन प्रश्नों में से किन्ही दो प्रश्नों के उत्तर अधिकतम 300 शब्दों में दें। प्रत्येक प्रश्न दस अंक का है।

Section - A (खण्ड–अ)

Objective Questions(वस्तुनिष्ठ प्रश्न)

1. Answer all the following questions. **5×3 =15**
निम्नलिखित सभी प्रश्न अनिवार्य हैं।

i) A transformer do not changes
a) current
b) voltage
c) frequncy
d) All of the above

ii) The number of parallel paths in LAP winding of DC machine if number of pole is 6.
a) 4
b) 6
c) 2
d) 8

iii) KVL is based on conservaton of
a) Algebraic sum of currents in closed-loop
b) Algebraic sum of power in closed-loop
c) Algebraic sum of losses in closed-loop
d) Algebraic sum of voltages in closed-loop

iv) KCL is based on conservaton of
a) charge
b) Energy
c) Algebraic sum of losses in closed-loop
d) Algebraic sum of voltages in closed-loop

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v) DC Motor work on principle of ?

a) left hand rule

b) right hand rule

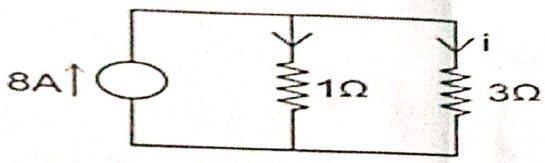
c) both a&b

d) none

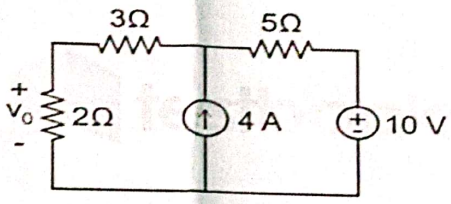
Section - B (खण्ड–ब)
Short Answer Questions (लघुउत्तरीय प्रश्न)

2. Answer any five of the following questions in maximum 150 words. **5×7=35**
निम्नलिखित में से किन्हीं पाँच प्रश्नों के उत्तर अधिकतम 150 शब्दों में दें।

I. Find the current through 1 ohm resistor



II. Using superposition theorem find V0 in the below circuit



III. Derive torqe equation of DC motor.

IV. Give the example with ciruit diagram of redundant resistance.

V. Define retentivity and coercivity with help of BH Curve

VI. Draw equivalent circiut diagram of Transformer. And write name of each component.

VII. Explain following:

A) Cable configration b) Types of Battery

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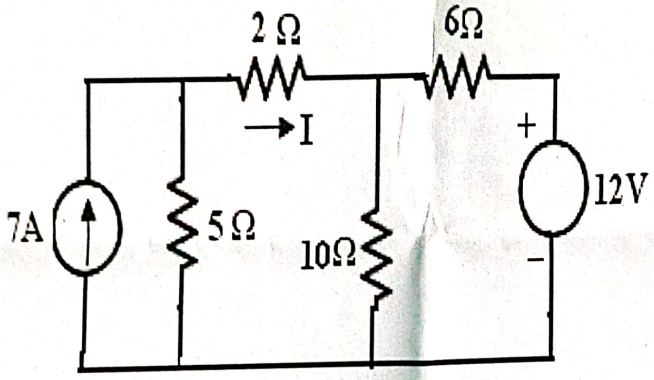
Section - C (खण्ड–स)
Descriptive Questions (विवरणात्मक प्रश्न)

3. **Answer any two of the following question in maximum 300 words.** **2×10=20**
निम्नलिखित में से किन्हीं दो प्रश्नों के उत्तर अधिकतम 300 शब्दों में दें।

i) (a) An 8 pole wave wound dc generator has 450 armature turns. It operates at 0.04 wb flux per pole and runs at 1200 rpm at no load. Find the emf induced by it

ii) Write short notes on the following:
a) MCB b) MCCB (c) Fuse (d) Types of wires

iii) Find the current through 10 ohm resistance using nodal analysis



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